

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/Ala Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-022895**Date Inspected:** 16-Apr-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG and Tower Components**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector (QA Inspector) George Goulet was present during the times noted above for observations relative to the work being performed.

**Bay 10**

This QA Inspector randomly observed the following work in progress in the Bay 10:

Heat straightening of 31TR3-001-034, 035, 038~043, 045, 046 located on PCMK OBG traveler rail. QC was identified as ZPMC CWI Shi Yu (QC1). Heat treatment variables recorded by QC1 appeared to comply with ZPMC document HSR1(B)-10292 as presented to this QA Inspector and verbally identified by QC1.

**Bay 11**

This QA Inspector randomly observed the following work in progress in the Bay 11:

SMAW welding of weld joint ESD1-TBSA7-3-23 located on PCMK east tower, lift 7. Welder was identified as 202319. QC was identified as QC1. Weld variables recorded by QC1 appeared to comply with WPS-B-P-2212-TC-U4c as verbally identified by QC1. See photo below of the welding operation in progress.

**OBG Trial Assembly Area**

This QA Inspector randomly observed the following work in progress in the OBG Trial Assembly Area:

SMAW repair welding of base metal, various locations located on PCMK OBG Segment 13CE. Welders were

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identified as 050969, 044760. QC was identified as ABF CWI Sheng Qing Quan (QC2). Assisting QC2 at this location and appearing to be monitoring the welding operation and recording data was ZPMC QC Wang Xiang Pin (QCA2), who was not a CWI. Weld variables recorded by QCA2 appeared to comply with WPS-345-SMAW-4G(4F)-FCM-repair-1 as displayed on ZPMC Weld Repair Report B-WR20601 as presented and verbally identified by QCA2. QC2 informed this QA Inspector that the base metal areas that were being repaired were in the areas where stanchion supports had been previously.

SMAW repair welding of weld joint SEG3001H-166 located on PCMK OBG Segment 13CE. Welders were identified as 050969, 044760. QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding operation and recording data was QCA2, who was not a CWI. Weld variables recorded by QCA2 appeared to comply with WPS-345-SMAW-3G(3F)-FCM-repair-1 as displayed on ZPMC Weld Repair Report B-WR20601 as presented and verbally identified by QCA2.

FCAW welding of weld joints SEG3007B-257, 262, 267, 272, 277, 282 located on PCMK OBG Segment 13AE. Welder was identified as 050242. QC was identified as QC2. Weld variables recorded by QC2 appeared to comply with WPS-B-T-2231-ESAB as verbally identified by QC2.

SMAW repair welding of weld joint SEG3007-001 located on PCMK OBG Segment 13AE. Welder was identified as 200113. QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding operation and recording data was QCA2, who was not a CWI. Weld variables recorded by QCA2 appeared to comply with WPS-345-SMAW-4G(4F)-FCM-repair-1 as displayed on ZPMC Weld Repair Report B-CWR2925 as presented and verbally identified by QCA2.

SMAW repair welding of weld joint DP3067-001-026 located on PCMK OBG Segment 12AW. Welder was identified as 066674. QC was identified as ZPMC CWI Li Yang (QC3). Weld variables recorded by QC3 appeared to comply with WPS-B-P-2213-TC-U4b as displayed on ZPMC Weld Repair Report B-WR15132 as presented and verbally identified by QC3. See photo below of page 1 of ZPMC Weld Repair Report B-WR15132 as presented by QC3.

SMAW welding and FCAW welding of weld joints BP3027-032~043 located on PCMK OBG Segment 12CW. Welders were identified as 067611 (SMAW), 066443 (FCAW). QC was identified as QC3. Weld variables recorded by QC3 appeared to comply with WPS-B-P-2112-FCM-1 (SMAW) and WPS-B-T-2132-ESAB (FCAW) as verbally identified by QC3.

FCAW welding of weld joints SP3043-026~036 located on PCMK OBG Segment 12CW. Welder was identified as 048433. QC was identified as QC3. Weld variables recorded by QC3 appeared to comply with WPS-B-T-2132-ESAB as verbally identified by QC3.

FCAW welding of weld joints SP3042-032~041 located on PCMK OBG Segment 12CW. Welder was identified as 066673. QC was identified as QC3. Weld variables recorded by QC3 appeared to comply with WPS-B-T-2132-ESAB as verbally identified by QC3.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

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**OBG Trial Assembly Area**

ZPMC 焊缝返修报告			
Welding Repair Report			
项目名称 Project Name	美国南湾大桥 SEG28	部件图号 Drawing No	SEG3006
合同号 Contract No.	04-0120F4	报告编号 Report No.	B-WR15132
项目编号 Project No.	ZP06-787	部件名称 Items Name	12CW大梁箱 12CW Longitudinal diaphragm
焊缝缺陷描述: Description of welding discontinuity:	NDT报告编号 Report No. of NDT NA		

The misalignment was found at 12CW box longitudinal diaphragm and longitudinal diaphragm connect plate at PP115.5, PP117 face south, PP115.5, PP117 face north, relevant welds: DP3065-001-013, SEG3006T-009/010, DP3067-001-026, SEG3006S-023/024, DP3067-001-013, SEG3005-009/010, the detail sees the following draft: part ① and part ② horizontal direction misalignment.

检验员 (Inspector): Wang Weiming 日期 (Date): 10.09.18

焊缝返修位置示意图:  
Draft of welding discontinuity:

04-0120F4 04 16 11 2157



## Summary of Conversations:

As noted above.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact James Devey 15000026784, who represents the Office of Structural Materials for your project.

**Inspected By:** Goulet, George

Quality Assurance Inspector

**Reviewed By:** Riley, Ken

QA Reviewer